

Appl. No. 10/789,692  
Amdt. dated November 29, 2006  
Reply to Office Action of October 17, 2006

## REMARKS/ARGUMENTS

### Status of Claims

Claims 32-34 and 36-42 are being resubmitted. Claims 32 and 37 have been amended. Claims 1-31 and 43-47 have been canceled as being drawn to a non-elected invention. Claim 35 has been canceled without prejudice or disclaimer of the subject matter. New Claims 48-50 have been added.

The Office Action requested affirmation of the provisional election made with traverse to prosecute the invention of Group II, Claims 32-42. Claims 32-42 were rejected under 35 U.S.C. 103(a) as being unpatentable over Liu et al. (U.S. Patent 6,576,199) in view of Limberg et al. (U.S. Patent 4,665,973).

Amended and new claims are supported by the detailed description, for example, paragraphs [0045], [0048], [0050], [0057]-[0061], [0063], and [0066], as well as Figures 6A-C, 8B, and 9B. Applicants respectfully submit that no new matter was added.

### Examiner Interview

A telephone interview was conducted between the Examiner and Applicants' representative on November 6, 2006. Proposed amendments to the Claims 32-36 were discussed. Further discussed were the references Liu et al. (U.S. Patent 6,576,199) and Limberg et al. (U.S. Patent 4,665,973).

In such interview, the Examiner suggested to show not only structural differences but also functional differences between the present invention and the prior art. The examiner requested that a functional distinction between the

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catalytic precooler and the augmentative catalytic device be made. No agreement was reached.

### Restriction

Applicant affirms the provisional election to proceed with Claims 32-42 and has, therefore, canceled Claims 1-31 and 43-47.

### Liu et al. (U.S. Patent 6,576,199)

Liu et al. teach an environmental control system that includes a catalytic converter 18 having ozone-destroying capability Col. 3, lines 12-18). The environmental control system of Liu et al. may further include a precooler that lowers the temperature of the compressed air prior to ozone destruction but has no catalytic capabilities (Col. 3, lines 19-21). The catalytic converter 18 and the non-catalytic precooler are not positioned within the same housing. The catalytic converter 18 may include a plurality of fins stamped into a plurality of aluminum sheets. The sheets are rolled around a tube in layers as concentric rings (Col. 5, lines 37-49).

Contrary to Liu et al. who teach a catalytic converter in series with a non-catalytic precooler, the present invention as in amended Claim 32 claims that "the catalytic precooler removes at least one pollutant from the air stream and cools the air stream" and that " the augmentative catalytic device removes the at least one pollutant from the air stream independently from the catalytic precooler". Furthermore, in contrast to Liu et al. who do not teach that the catalytic converter and the non-catalytic precooler are positioned within the same housing, the present invention as in Claim 32 (as amended) claims that "the catalytic precooler and the augmentative catalytic device are disposed

within a single housing".

Contrary to Liu et al. who teach a catalytic converter having a plate-fin configuration of concentric rings, the present invention as in Claim 37 (as amended) claims that "the augmentative catalytic device includes a single plate-fin layer and has a spiral plate-fin configuration. Furthermore, Liu et al. who teach a non-catalytic precooler that does not have an offset plate-fin configuration teach away from the present invention as in claim 37 (as amended) that claims "a catalytic precooler...having an offset cross-flow plate-fin configuration".

Therefore, Liu et al. do not make obvious the present invention as in independent Claims 32 and 37 (as amended), either alone or with the other references of record. Consequently, the section 103 (a) rejections should be withdrawn.

Limberg et al. (U.S. Patent 4,665,973)

Limberg et al. teach an environmental control system having an ozone decomposition catalyst coating in the hot pass side of the primary heat exchanger or precooler 18 (Fig. 2; Col. 2, lines 41-65). The core of the primary heat exchanger has a plate-fin construction with cross-flow capabilities (Figure 2; Col. 2, lines 43-65) where the airflow passes straight through the hot pass passages. Limberg et al. teach utilizing a catalytic precooler but not teach a supplemental catalytic device and, therefore, do not teach that "a catalytic precooler and an augmentative catalytic device are disposed within a single housing" as does the present invention in Claim 32 (as amended).

Contrary to Limberg et al. who teach a catalytic precooler only, the present invention as in Claim 32 (as amended) claims "a catalytic precooler" and "an augmentative catalytic device disposed in series with the catalytic precooler". Even if the catalytic precooler of Limberg et al. would be used to replace the non-catalytic precooler of Liu et al., the present invention, as in Claim 32 (as amended) would not have been obvious since neither Limberg et al. nor Liu et al. teach that "the catalytic precooler and the augmentative catalytic device are disposed within a single housing" as does the present invention in Claim 32 (as amended). By disposing both the catalytic precooler and the augmentative catalytic device "within a single housing", as claimed in amended Claim 32 of the present invention, considerable weight savings compared to systems of Limberg et al. and Liu et al. may be achieved (paragraph [0050]).

Contrary to Limberg et al. who teaches a plate-fin construction with cross-flow capabilities (Figure 2; Col. 2, lines 43-65) where the airflow passes straight through the hot pass passages, the present invention as in Claim 37 (as amended) claims "a catalytic precooler...having an offset cross-flow plate-fin configuration" (as supported by the description, for example, at Figure 8B; paragraph [0063]). Utilizing an "offset cross-flow plate-fin configuration" as in amended Claim 37 of the present invention "increases turbulence of the air stream passing through the catalytic precooler". Neither Limberg et al. nor Liu et al. teach or suggest to offset the hot pass passages of the catalytic precooler and the non-catalytic precooler, respectively.

Therefore, Limberg et al. do not make obvious the present invention as in independent Claims 32 and 37 (as amended), either alone or with the other references of record. Consequently, the section 103 (a) rejections should be withdrawn.

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CONCLUSION

Applicants would like to thank the Examiner for the telephone interview of November 6, 2006. The suggestions made by the Examiner are reflected in this response.

Reconsideration and withdrawal of the Office Action with respect to Claims 32-34 and 36-42 is respectfully requested. Consideration of new Claims 48-50 is respectfully requested. It is believed that Claims 32-34, 36-42, and 48-50 are now in condition for allowance. Applicants respectfully request that a timely Notice of Allowance be issued in this case.

In the event the examiner wishes to discuss any aspect of this response, please contact the attorney at the telephone number identified below.

The Commissioner is hereby authorized to charge payment of the following fees with this communication or credit any overpayment to Deposit Account No. 50-0851:

Any filing fees under 37 CFR 1.16 for the presentation of extra claims.

Respectfully submitted,

By: /Gudrun Passlack/  
Gudrun Passlack  
Registration No. 47,847  
Michael A. Shimokaji  
Attorney Registration No. 32, 303

Honeywell International Inc.  
Law Dept. AB2  
P.O. Box 2245  
Morristown, NJ 07962-9806  
(310) 512-4886  
Attn: Oral Caglar